

10/784, 784

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	9	((("6670026") or ("6316048") or ("6441341") or ("6397603") or ("6280550") or ("6024898") or ("6258737") or ("6986940") or ("6902692"))).PN.	USPAT	OR	OFF	2006/07/20 12:18
L2	5	1 and (process method)[clm]	USPAT	OR	ON	2006/07/20 12:09
L5	20	((("6350713") or ("6294125") or ("6270851") or ("5716671") or ("5609912") or ("5436042") or ("5370911") or ("5298303") or ("4714642") or ("4384021") or ("3991248") or ("3925587") or ("3819461") or ("3818082") or ("3669158") or ("5015540") or ("5330854") or ("5336350") or ("6024898") or ("6258737"))).PN.	USPAT	OR	OFF	2006/07/20 12:20
L6	5150	((427/249.2-249.5) or (427/249.15) or (427/249.16) or (427/255.12) or (427/294) or (427/226-228)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/20 15:43
L7	1022	(264/29.1).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/20 15:43
L8	6386	((428/411.1) or (428/446)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/20 15:43
L9	68	(6 7 8) and (((woven weaving (warp and weft) unidirectional) with tow) or ((biased unidirectional) with ceramic with sheet) or (tow\$1preg (tow near3 pre\$1preg)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/20 15:45
L10	20	9 and ("chemical vapor infiltration" "CVI")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/20 15:46

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EAST Search History

L11	4	9 and (("chemical vapor infiltration" "CVI") same ((boron adj nitride) "BN") same ((silicon adj carbide) "SiC"))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/20 15:47
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WPF
07/20/2006

AND ceramic AND AND tow AND unidirectional

Search

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☒ Engineering, Computer Science, and Mathematics
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The "AND" operator is unnecessary -- we include all search terms by default. [\[details\]](#)

Scholar Results 1 - 100 of about 108 for AND ceramic AND AND tow AND unidirectional | biased woven | weaving fiber OR fibre (0:19 seconds)

[All articles](#) [Recent articles](#)

Fabrication of Woven Metal Fibre Reinforced Glass Matrix Composites - group of 5 »

AR Boccaccini, J Ovenstone, PA Trusty - Applied Composite Materials, 1997 - Springer
 ... dimensional reinforcing elements over unidirectional fibre reinforcement, as ... fully
 the intra-tow regions, (a ... Ponton, CB, 'Processing Ceramic-Matrix Composites ...
 Cited by 9 - [Web Search](#) - [BL Direct](#)

EFFECTS OF THERMAL AGEING ON THE MECHANICAL PROPERTIES OF A POROUS-MATRIX CERAMIC COMPOSITE - group of 7 »

E Carelli - J. Am. Ceram. Soc., 2002 - Blackwell Synergy
 ... failure sites within an individual tow and the ... 600 Journal of the American Ceramic
 Society—Carelli et ... symmetric lay-up of unidirectional fiber composite plies ...
 Cited by 11 - [Web Search](#) - [BL Direct](#)

Thermal Expansion of laminated, Woven, Continuous Ceramic Fiber/Chemical-Vapor-Infiltrated Silicon ... - group of 4 »

W Seattle - Blackwell Synergy
 ... to address the specific case of unidirectional ceramic fiber composites is ... 1336 Journal
 of the American Ceramic Society - Eckel ... 3w 4w sou sou 700 a00 900 tow ...
 Cited by 2 - [Web Search](#)

Stress pattern analysis by thermal emission of plain weave carbon fiber/epoxy resin composite ... - group of 3 »

MC Osborne, AL Moran - ASTM Journal of Testing and Evaluation(USA), 2001 - astm.org
 ... In this case, each tow would see the principal ... the same volume fraction used in ceramic
 matrix com ... with alternating ori- entations of unidirectional plies, not ...
 Cited by 1 - [Web Search](#) - [BL Direct](#)

MATRIX CRACKING IN 3 D ORTHOGONAL MELT-INFILTRATED SiC/SiC COMPOSITES WITH VARIOUS Z-FIBRE TYPES - group of 4 »

GN Morscher, HM Yun, J DiCarlo - Journal of the American Ceramic Society, 2005 - Blackwell Synergy
 ... 21 which can be applied generally to ceramic matrix composites ... The smaller the
 Z-direction tow size (height ... than in adjacent matrix-rich "unidirectional" regions ...
[Web Search](#)

Simultaneous measurements of permeability and capillary pressure of thermosetting matrices in woven ... - group of 3 »

KJ Ahn, JC Seferis, JC Berg - Polymer Composites, 1991 - doi.wiley.com
 ... elastic reinforcement (usually carbon or ceramics in contin ... dverent fiber alignments
 in unidirectional-fibrous preformzs ... Each tow consisted of 3000 carbon fiber ...
 Cited by 32 - [Web Search](#)

SHEAR DAMAGE MECHANISMS IN A WOVEN, NICALON-REINFORCED CERAMIC-MATRIX COMPOSITE - group of 7 »

WP Keith, KT Kedward - J. Am. Ceram. Soc., 1997 - Blackwell Synergy
 ... tow normal to the surface ... Damage Mechanisms in a Woven, Nicalon-Reinforced
 Ceramic-Matrix Composite ... test of the woven composite, the weave and membrane stresses ...
 Cited by 6 - [Web Search](#) - [BL Direct](#)

The Nondestructive Evaluation of Advanced Ceramics and Ceramic-Matrix Composites - group of 2 »

J Kim, PK Liaw - Journal of Metals, 1998 - tms.org
 ... In the case of the [0] 12 unidirectional composite panel ... to the porosity at the
 fiber-tow intersection ... technique is used to investigate ceramic-matrix composites ...
 Cited by 3 - [Cached](#) - [Web Search](#)

DAMAGE MECHANISMS IN THREE-DIMENSIONAL WOVEN REINFORCED

JP Gyekenyesi - pdf.aiaa.org
 ... the desirable properties of monolithic ceramics while pro ... reinforcements offer
 advantages over unidirectional and angle ... Five hundred filament tow of 1800 denier ...
[Web Search](#)



Micro-mechanical simulation of damage in a 2D woven SiC/SiC composite

V Galard, J Lamon - membres.lycos.fr

... with the experimental data obtained upon **unidirectional** composites [Gui94 ... Tab.4 Summary of the **tow** properties. ... were performed with the data of the **woven** SiC/SiC ...

[View as HTML](#) - [Web Search](#)

[BOOK] Analysis and Performance of Fiber Composites - group of 3 »

BD Agarwal, LJ Broutman - 1990 - books.google.com

... Thermoplastic-Resin Matrix Composites (Short-Fiber Composites) / 48 ... 50 2.3.4 Fabrication of **Ceramic** Matrix Composites ... 3 BEHAVIOR OF UNIDIRECTIONAL COMPOSITES ...

Cited by 283 - [Web Search](#) - [Library Search](#)

Polymer Fibre Composites, Basic Types, Principles of Manufacture, and Properties. Part 2. ... - group of 2 »

KE Perepelkin - Fibre Chemistry, 2005 - Springer

... based on **unidirectional** RFF (fibres ... of complex shape is conducted with fibres, **tow**, and sliver ... **ceramic** or abrasive tools are used for processing fibreglass ...

[Web Search](#)

[BOOK] Oxide-Based Fiber-Reinforced Ceramic-Matrix Composites: Principles and Materials

B Saruhan - 2003 - books.google.com

... people in the fields of **fiber** synthesis, surface ... 1D — **unidirectional** 2D — two dimensional 3D — three ... expectation is that the **ceramic** composite products ...

Cited by 1 - [Web Search](#) - [Library Search](#)

Melt Infiltrated (MI) SiC/SiC Composites for Gas Turbine Applications - group of 7 »

KL Luthra, GS Corman - High temperature **ceramic** matrix composites, edited by W. ..., 2001 - crd.ge.com

... Silcomp, the first melt infiltrated **ceramic** matrix composite ... Following **fiber** coating the **fiber tow** is pulled ... on a drum to form a **unidirectional** pre-impregnated ...

Cited by 3 - [View as HTML](#) - [Web Search](#)

Evaluation of Macroscopic and Local Strains in a Three-Dimensional Woven C/SiC Composite - group of 3 »

QD Yang, KL Rugg, BN Cox, DB Marshall - Journal of the American **Ceramic** Society, 2005 - Blackwell Synergy

... **Unidirectional** properties of straight tows ... **Tow** waviness modification in the loading direction only ... Journal of the American **Ceramic** Society Volume 88 Issue 3 Page ...

[Web Search](#)

Design Issues in Using Integral Textile Ceramic Composites in Turbine Engine Combustors - group of 4 »

BN Cox, QD Yang, DB Marshall, JB Davis - Journal of Propulsion and Power, 2005 - pdf.aiaa.org

... exploit integral structures formed from **ceramic** fibers and matrices by **weaving** or other ... However, more interesting, an integrally **woven** transpiring wall ...

[Web Search](#)

Continuous Fiber Ceramic Composites

JK WESSEL - doi.wiley.com

... matrix interface coating and a **ceramic** matrix, arranged to ... textile-forming techniques: single-**fiber** filaments can be grouped into a **tow**, **woven** into fabrics ...

[Web Search](#)

Stressed Oxidation of C/SiC Composites

US ARMY - ntrs.nasa.gov

... from the crack until eventually much of the **fiber tow** had been ... Bonding on the Behavior of a **Unidirectional** Carbon-Carbon ... of Carbon Fibers and Films in **Ceramic** ...

[View as HTML](#) - [Web Search](#)

Characterization of composite microstructure and damage using optical coherence tomography - group of 7 »

JP Dunkers, CG Zimba, KM Flynn, DL Hunston, R ... - Nondestructive evaluation of aging materials and composites ..., 1999 - polymer.nist.gov

... until the bottom of the **tow** is reached ... transfer molding of a pre-**ceramic** polymer, ...

Composites ... volumetric reconstructions of an epoxy/**unidirectional** E-glass ...

[View as HTML](#) - [Web Search](#)

[BOOK] Carbon Fiber Composites

D Chung - 1994 - books.google.com

... to provide up-to-date information on the whole spectrum of carbon **fiber** composites, including polymer-matrix, metal-matrix, carbon-matrix, **ceramic**-matrix, and ...

Cited by 30 - [Web Search](#) - [Library Search](#)

Fabrication and mechanical properties of woven Al - group of 6 »

H Kakisawa, T Mamiya, SQ Guo, WH Liu, SJ Zhu, Y ... - Materials Science and Technology, 2003 - ingentaconnect.com

... among the individual bres in the **tow** were lled ... 1 Concept of minicomposite reinforced

ceramics ... **Unidirectional** bre bundles were obtained from the **woven** fabric ...

Cited by 2 - [Web Search](#) - [BL Direct](#)

Evolution of Failure Mechanisms in 2D and 3D Woven Composite Systems Under Quasi-Static Perforation - group of 5 »

JN Baucom, MA Zikry - Journal of Composite Materials, 2003 - jcm.sagepub.com

... internal fracture of a z-**tow** (Figure 20). ... variations of fabric architecture in GFRP

woven composite systems ... areal density, thickness, and **fiber**-volume- fraction ...

Cited by 5 - [Web Search](#) - [BL Direct](#)

Simplified Micromechanics of Plain Weave Composites

O Toledo, O Cleveland - gltrs.grc.nasa.gov

... The CEMCAN (**Ceramic** Matrix Composite Analyzer, ref ... The **tow** properties were selected

that correspond to ... ratio (fvr) AS Graphite/Epoxy **unidirectional** tape prepreg ...

[View as HTML](#) - [Web Search](#)

Monte Carlo simulation of creep failure in a 0°/90° plain weave SiC/SiC composite lamina - group of 5 »

DN Coon - Journal of Materials Science, 2003 - Springer

... predicted to be equivalent to a **unidirectional** composite ... sion equal to the width

of a single **fiber tow**. ... creep behavior of **fiber** rein- forced **ceramic** matrix mini ...

[Web Search](#) - [BL Direct](#)

Influence of Strong Fiber/Coating Interfaces on the Mechanical Behavior and Lifetime of Hi-Nicalon/(... - group of 7 »

S Bertrand, R Pailler, J Lamon - interfaces - Blackwell Synergy

... in the most advanced **ceramic** matrix composites ... and Materials Minicomposites are

unidirectional composites reinforced with a single **tow** of fibers. ...

Cited by 5 - [Web Search](#) - [BL Direct](#)

Analysis of composites using Raman and fluorescence microscopy- a review - group of 5 »

RJ Young - Journal of Microscopy(UK), 1997 - Blackwell Synergy

... carbon/epoxy (Huang & Young, 1995) and **ceramic**/glass (Yang & ... drilled in a 10-mm-wide

unidirectional aramid/ epoxy ... intervals along the centre of a **tow** of fibres ...

Cited by 8 - [Web Search](#) - [BL Direct](#)

THERMOPHYSICAL AND MECHANICAL PROPERTIES OF A THREE-DIMENSIONAL Hi-NICALON/SiC COMPOSITE - group of 4 »

S Wu, L Cheng, Q Zhang, L Zhang, Y Xu - International Journal of Applied **Ceramic** Technology, 2006 - Blackwell Synergy

... Tensile Properties of Single **Tow** Hi-Nicalon ... Thermal Expansion Behaviour of

Unidirectional Carbon-Fibre ... Laminated, **Woven** Continuous **Ceramic** Fiber/Chemical-Vapor ...

[Web Search](#)

ASM Handbook/extraction

H Hansmann, H Wismar - mb.hs-wismar.de

... Dry or prepreg yarns, tapes, or **tow** can be braided over a ... composites are not as well

characterized as those for **unidirectional** tape or **woven** ply laid-up ...

[View as HTML](#) - [Web Search](#)

Mechanical Characterization of Si-C (O) Fiber/SiC(CVI) Matrix Composites With a BN-Interphase - group of 4 »

SB Prouhet, G Camus, CB Labrugere, A Guette, E ... - Journal of the American **Ceramic** Society(USA), 1994 - Blackwell Synergy

... of three CVI-processed 2D **woven** SiC/BN ... 650 Journal of the American **Ceramic**

Society-Prouhet et ... composite (material A). (a) transverse **fiber tow**; (b) longitudinal ...

Cited by 9 - [Web Search](#) - [BL Direct](#)

High Strain-Rate Behavior of Plain-Weave S-2 Glass/Vinyl Ester Composites - group of 4 »

BA Gama, JW Gillespie, H Mahfuz, RP Raines, A ... - Journal of Composite Materials, 2001 - jcm.sagepub.com

... bonded layers of thick composites, **ceramics** and rubber ... unit cells of the **woven fiber**

architecture. ... **Unidirectional** cylindrical rod specimens have also been made ...

Cited by 7 - [Web Search](#) - [BL Direct](#)

Fatigue Mechanisms in Graphite/SiC Composites at Room and High Temperature - group of 5 »

WL Morris, BN Cox, DB Marshall, RV Inman, MR James - Journal of the American **Ceramic** Society, 1994 - Blackwell Synergy

... of eight layers of two- dimensional plain **woven** fabric, in ... 194 Journal of the American

Ceramic Society-Morris et al ... lay almost entirely within a 0" **tow**, ie, one ...

Cited by 11 - [Web Search](#) - [BL Direct](#)

Discrete Cohesive Zone Model to Simulate Static Fracture in 2D Triaxially Braided Carbon Fiber ... - group of 2 »

AGS De Xie, C Sun, AM Waas, A Caliskan - Journal of Composite Materials - jcm.sagepub.com

... Rectangular composite coupons were cut in such a way that the axial **fiber tow** is misaligned with respect to the direction of loading. ... **Biased tows** ($\pm 45^\circ$) 1 2 ...

[Web Search](#)

Modeling the Unsaturated Flow in Liquid Composite Molding Processes: A Review and Some Thoughts - group of 5 »

KM Pillai - Journal of Composite Materials, 2004 - jcm.sagepub.com

... Sastry [23] incorporated the physics of delayed **tow**-impregnation in ... droop, whereas the profiles of the **woven** biaxial mat 5 and the **unidirectional** stitched mat ...

Cited by 1 - [Web Search](#)

[BOOK] Use of Fibre Reinforced Polymers in Bridge Construction

T Keller - books.google.com

... Stiffness and strength of a **fiber**-matrix bond depend ... in this direction (so-called **unidirectional** UD laminates ... to changes multi-layered structures (**woven** and non ...

Cited by 2 - [Web Search](#) - [Library Search](#)

Fracture Toughness in Random-Chopped Fiber-Reinforced Composites and their Strain Rate Dependence - group of 2 »

GC Jacob, JM Starbuck, JF Fellers, S Simunovic, RG ... - Journal of Applied Polymer Science, 2006 - doi.wiley.com

... 2 Polymer Matrix Composites Group, Metals and **Ceramics** Division, Oak ... **tow** size) and CCS150 (150 gsm **tow** size) composites had a **fiber** volume fraction ...

Cited by 1 - [Web Search](#)

[BOOK] Manufacturing Processes for Advanced Composites

F Campbell Jr - 2003 - books.google.com

... **Unidirectional** 00 Tension 10° Compression ... Common **tow** sizes are 1k, 3k, 6k, 12k and 24k, where ... High-temperature **ceramic** fibers, such as silicon carbide (Nicalon ...

Cited by 2 - [Web Search](#) - [Library Search](#)

[BOOK] Isothermal Fatigue, Damage Accumulation, and Life Prediction of a Woven PMC - group of 2 »

AL Gyekenyesi - 1998 - gltrs.grc.nasa.gov

... carbon **fiber**-reinforced polymer resin laminates are made from **unidirectional**, pre-impreg- ... occur in **woven** laminates. ... Note, each **tow**/bundle ...

Cited by 3 - [View as HTML](#) - [Web Search](#) - [Library Search](#)

[BOOK] Composites Manufacturing: Materials, Product and Process Engineering - group of 2 »

SK Mazumdar - 2002 - books.google.com

... 1 1.1 Conventional Engineering Materials 11.1.1 Metals 21.1.2 Plastics 31.1.3 **Ceramics** 31.1.4 Composites ... 2.2.3 Aramid **Fiber** Manufacturing ... 2.4.1 **Woven** Fabrics ...

Cited by 13 - [Web Search](#) - [Library Search](#)

FUGITIVE INTERFACIAL CARBON COATINGS FOR OXIDE/OXIDE COMPOSITES - group of 7 »

K Keller - J. Am. Ceram. Soc., 2000 - Blackwell Synergy

... A) Modulus: The modulus of a **unidirectional** composite is ... data normalized with respect to **tow** strength for ... 334 Journal of the American **Ceramic** Society—Keller ...

Cited by 10 - [Web Search](#) - [BL Direct](#)

[BOOK] Microstructural Characterisation of Fibre-reinforced Composites

J Summerscales - 1996 - books.google.com

... for detailed characterisation of continuous **unidirectional** and fabric ... considering the yarn shape in **woven** fabric composites ... in the context of **ceramic**-matrix and ...

Cited by 2 - [Web Search](#) - [Library Search](#)

In-Plane Properties of Composite Laminates with Through-Thickness Pin Reinforcement

CA Steeves, NA Fleck - www-mech.eng.cam.ac.uk

... an approximate elastic shear lag model for fibres reinforcing cracked **ceramic** ... control and z-pinned specimens of **unidirectional** IMS/924C ... region of **fiber** weaving ...

[View as HTML](#) - [Web Search](#)

The application of 1-3 piezocomposites in acoustic transducers - group of 2 »

WA Smith - Applications of Ferroelectrics, 1990., IEEE 7th ..., 1990 - ieeeexplore.ieee.org

... soft' piezoceramic; and use a **biased** electms- trictor ... interpo- lates between the **tow** impedance of ... the dielectric constant, While typical **ceramic** densities, 6 ...

Cited by 10 - [Web Search](#)

FEASIBILITY STUDY OF VARTM MANUFACTURING OF CARBON BIAXIAL BRAIDED COMPOSITES USING EPON 9504 EPOXY ...

JS Tate, AD Kelkar, J Rice - PROCEEDINGS OF THE JAPAN INTERNATIONAL SAMPE SYMPOSIUM, 2003 - ncat.edu

... are essentially identical to **unidirectional** tape laminates ... fibers include aramid, carbon, **ceramics**, fiberglass, natural ... sleeves with 12K **tow** size Manufactured ...

[View as HTML](#) - [Web Search](#) - [BL Direct](#)

[BOOK] Fundamental Principles of Fiber Reinforced Composites - group of 3 »

AHG Ashbee, KHG Ashbee - 1993 - books.google.com

... Methods 43 2.5 Curing 49 2.6 Worked Examples 49 2.7 Three-Dimensional Weaves 58

2.8 **Fiber Reinforced Ceramics** 65 2.9 Sintering of **Ceramic Matrix Composites** 69 ...

Cited by 19 - [Web Search](#) - [Library Search](#)

Polymer Composites

J SHAFFER, TP PHILIPPIDIS, AP VASSILOPOULOS - doi.wiley.com

... are producing material with heavier **tow** count and ... **Ceramic** Nippon Carbon Nicalon 193

2.9 2.55 High ... prepreg as parallel fibers (**unidirectional**), **woven** fabrics of ...

[Web Search](#)

Polymer composites in 2000: structure, performance, cost and compromise - group of 5 »

MG Bader - Journal of Microscopy, 2001 - Blackwell Synergy

... silicon carbide and other polymeric and **ceramic** fibres. ... Thus, a **unidirectional** array has a stiffness index of 0.8 ... advantage of the hybrid co-mingled **tow** is that ...

Cited by 2 - [Web Search](#) - [BL Direct](#)

[BOOK] Integrated Design and Manufacture Using Fibre-Reinforced Polymeric Composites

V Middleton - 2000 - books.google.com

... A.4 Properties of a **unidirectional** ply ... composite materials' the restriction to

fibre-reinforced thermoplastic ... and rubber, metal and **ceramic** matrix composites ...

Cited by 2 - [Web Search](#) - [Library Search](#)

[BOOK] Composite Structures for Civil and Architectural Engineering

DH Kim - 1995 - books.google.com

... The most basic is a '**tow**' which is ... Many plastics, glass, carbon and **ceramic** materials are ... which determines the strength level achieved: (a) **Unidirectional**. ...

Cited by 10 - [Web Search](#) - [Library Search](#)

... and Thermal Expansion Behavior of Pseudo-Unidirectional and 2-Directional Quasi-Carbon Fiber/ ...

D Cho, Y Choi, JK Park, J Lee, BI Yoon, YS Lim - FIBERS AND POLYMERS, 2004 - pdf.ricta.or.kr

... 600, Korea 3 Department of **Ceramics** Engineering, Myong ... fibers with 6000 filaments per **tow** (Tae Kwang ... as reinforcement for pseudo-**unidirectional** (UD) composites ...

[View as HTML](#) - [Web Search](#) - [BL Direct](#)

[BOOK] Third International Workshop on High Performance Fiber Reinforced Cement Composites(HPFRCC 3): ...

HW Reinhardt, AE Naaman - books.google.com

... work- shop on High Performance **Fibre** Reinforced Cement ... optimized **fiber** shapes and geometry which are designed ... made out of threads which are **woven**, weft knitted ...

[Web Search](#) - [Library Search](#)

Automated Fabrication Technologies for High Performance Polymer Composites - group of 7 »

MJ Shuart, NJ Johnston, HB Dexter, JM Marchello, ... - Composites Fabrication, 1998 - ntrs.nasa.gov

... for high performance applications, **fiber** reinforced polymer ... the textile processes of **weaving** and braiding ... film infusion (RFI) and automated **tow/tape** placement ...

Cited by 4 - [View as HTML](#) - [Web Search](#) - [Library Search](#)

The Manufacturing of Wet-laid Hydroentangled Glass Fiber Composites For Industrial Applications

N Vaidya - 2002 - lib.ncsu.edu

... the consolidation process of **unidirectional** composites ... polymer matrix composites

(PMC's), **ceramic** matrix composites ... **fiber** Thermoset polymer **Fiber tow** (continuous ...

[View as HTML](#) - [Web Search](#)

... of fabrication, and properties. Part 3. Basic types of polymer fibre composites, properties, and ...

KE Perepelkin - **Fibre Chemistry**, 2006 - Springer

... many traditional materials, metals and **ceramics** in particular ... of fabric (bulk fabrics)

woven together. ... Composite materials based on **unidirectional tow** or sliver ...

[Web Search](#)

FIBRE COMPOSITE MATERIALS

OF FABRICATION, P Part - **Fibre** Chemistry, 2006 - ingentaconnect.com
... many traditional materials, metals and **ceramics** in particular ... of fabric (bulk fabrics)
woven together. ... Composite materials based on **unidirectional tow** or sliver ...
[Web Search](#)

[BOOK] The strength of angle-ply laminates and composites with misaligned fibres.
M Khatibzadeh - 1999 - collectionscanada.ca
... 30° 88 Page 9. Figure Page 1.1. Schematic depiction of **fibre**
waviness in a **unidirectional** panel 5 1.2. ...
[Web Search](#) - [Library Search](#)

Tensile and stress-rupture behavior of SiC/SiC minicomposite containing chemically vapor deposited ... - group of 6 »
H Li, GN Morscher, J Lee, WY Lee - Journal of the American **Ceramic** Society, 2004 - Blackwell Synergy
... not in epoxy, ie, the length of **tow** or minicom ... Member, American **Ceramic** Society ... stress
required to form matrix cracks in the **unidirectional** minicomposite usually ...
[Cited by 2](#) - [Web Search](#) - [BL Direct](#)

[PS] AUTOMATED FABRICATION TECHNOLOGIES FOR HIGH PERFORMANCE POLYMER COMPOSITES MJ Shuart, NJ Johnston, ... - group of 2 »
JM Marchello, RW Grenoble - techreports.larc.nasa.gov
... The **ceramic** hot bar fixture facilitated transverse melt ... **Unidirectional** panels placed
under conditions of optimum ... include heat transfer, **tow** thermal deformation ...
[View as HTML](#) - [Web Search](#)

Lockup, chains and the delocalization of damage - group of 4 »
BN Cox - Journal of Materials Science, 1996 - Springer
... of similar fibres and resin in **unidirectional** tape laminates ... a lock-up mechanism
involving **tow** waviness [28 ... Like a fibrous **ceramic** matrix composite, and unlike ...
[Cited by 8](#) - [Web Search](#) - [BL Direct](#)

Effect of a boron nitride interphase that debonds between the interphase and the matrix in SiC/SiC ... - group of 8 »
GN Morscher, HM Yun, J DiCarlo - Journal of the American **Ceramic** Society, 2004 - Blackwell Synergy
... Member, American **Ceramic** Society. ... **Tow** ends per centimeter. ... 1). However, because of
the close packing of fibers in **woven** bundles, debonding between Fig. ...
[Cited by 5](#) - [Web Search](#) - [BL Direct](#)

[BOOK] Reinforced Plastics Handbook - group of 3 »
J Murphy - 1998 - books.google.com
... HISTORICAL BACKGROU ND **FIBRE**-REINFORCED plastics are a class of materials in which
the basic properties of plastics (such as lightness in weight, very good ...
[Cited by 21](#) - [Web Search](#) - [Library Search](#)

MECHANICAL PROPERTIES OF THIN PYROLYTIC CARBON INTERPHASE SiC-MATRIX COMPOSITES REINFORCED WITH NEAR ... - group of 5 »
Y Katoh, T Nozawa, LL Snead - Journal of the American **Ceramic** Society, 2005 - Blackwell Synergy
... of non-stoichiometric SiC(-based) fibers (eg, **ceramic**-grade [CG ... 7.5 m, in a 2D
plain-**woven** architecture (**fiber** ... corresponds to one-half of the **tow** interval, the ...
[Web Search](#)

[BOOK] A Survey of Emerging Materials for Revolutionary Aerospace Vehicle Structures and Propulsion Systems - group of 3 »
CE Harris, MJ Shuart, HR Gray - 2002 - techreports.larc.nasa.gov
... Inconel 718 and the Nextel N720 **ceramic fiber** were selected as the reference materials.
All materials tabulated in Tables 4 and 5 are described in Appendix II. ...
[View as HTML](#) - [Web Search](#) - [Library Search](#)

[BOOK] Short Fibre-Polymer Composites
S De - 1996 - books.google.com
... 8.8 Modulus properties of **unidirectional** short **fibre** reinforced ... is available known
as 'long **fibre**' thermoplastic, in ... rod in which a continuous **tow** of fibres ...
[Cited by 8](#) - [Web Search](#) - [Library Search](#)

[BOOK] Fourth Asian-Australasian Conference on Composite Materials ACCM-4: Composite Technologies for 2020 - group of 2 »
L Ye - 2004 - books.google.com
... Multiaxial Fatigue Behavior of **Unidirectional** Laminates Diao ... Fabricating Mixed a113
Sialon **Ceramics** as Composite ... Fabric Composites with Spread **Tow** Kurashiki, T ...

Web Search

[BOOK] Carbon-Carbon Materials and Composites - group of 3 »

JD Buckley, DD Edie - 1993 - books.google.com

... of forms, from one-dimensional to n-dimensional, using **unidirectional** tows, tapes, or **woven** cloth (fig. ... Simj& version published in **Ceramic** Bulletin, vol. ...

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On the effect of stacked fabric layers on the stiffness of a **woven** composite - group of 5 »

N Jekabsons, J Bystrom - Composites Part B: Engineering, 2002 - sm.luth.se

... to be true for isotropic materials or even for **unidirectional** laminated composites ...

tow ; ... is a result of the evolution of a model for **ceramics** composites given ...

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Use Of Advanced Composite Materials in Spacecraft Structural Design - group of 2 »

N Davinic, B Brauni, W Simon, J Houghtons, ISS res ... - AIAA Space Programs and Technologies Conference, Huntsville, ..., 1995 - pdf.aiaa.org

... **Materials Matrix** materials can be organic, metallic, or **ceramic**. ... A single **tow** commonly contains anywhere from 1000 to ... a single axis or they can be **woven** into a ...

[Web Search](#)

Interfaces and interphases. - group of 2 »

LT Drzal - Materials Park, OH: ASM International, 2001., 2001 - mb.hs-wismar.de

... **Matrices** may be **ceramic**, metallic, polymeric, and cementitious. ... fibers than prepregging of **unidirectional** tape), pliability or drape of the sized **tow** or cloth ...

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Composite materials after seventy years - group of 3 »

A Kelly - Journal of Materials Science, 2006 - Springer

... **Unidirectional** Carbon/epoxy 131 1517 1.55 85 979 ... for twisting the fibres to form a handleable **tow** will be ... very similarly to some of the **ceramic** composites I ...

[Web Search](#)

Finite element analysis and simulation of polymers-an addendum: a bibliography(1996-2002). - group of 6 »

J Mackerle - Modelling and Simulation in Materials Science and ..., 2003 - iop.org

... transverse modulus of polymer **unidirectional** composites ... injection molding filling and **fiber** orientation, including ... pressure casting moulds CFI- **Ceramic** Forum Int ...

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[BOOK] Design and Manufacture of Composite Structures - group of 2 »

GC Eckold - 1993 - books.google.com

... The choice is not limited to polymers and both **ceramics** and metal matrices can feature in the materials ... (**Unidirectional**) Ti tani um ... GR P (**Woven**) •PE EK ...

Cited by 15 - [Web Search](#) - [Library Search](#)

Vacuum-Assisted Resin Transfer Molding (VARTM) Model Development, Verification, and Process Analysis - group of 2 »

JR Sayre - 2000 - scholar.lib.vt.edu

... The permeability of an idealized **unidirectional** reinforcement was ... times larger than the real **fiber** radius ... permeabilities of **woven** fabric preforms for porosities ...

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G Savage, E Savage - 1993 - books.google.com

... 62 2.5 Surface treatment of carbon fibres and interfacial bonding 64 2.6 Carbon **fiber** product forms 65 ... 99 3.5 CVD processing of **ceramic** matrix composites 107 ...

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France-Australia Technical Arrangement TA 1/99-Work Package 2: Ab initio estimation of composite ... - group of 2 »

PJ Callus - Melbourne, Victoria: Defence Science and Technology ..., 2005 - dsto.defence.gov.au

... fibres and **fiber** forms (such as **unidirectional** prepreg tape ... For example **woven** fabrics will have regular, and possibly ... When metals or **ceramics** are imaged with XRD ...

[Web Search](#)

Oxidation mechanisms and kinetics of SiC-matrix composites and their constituents - group of 6 »

R Naslain, A Guette, F Rebillat, S Le Gallet, F ... - Journal of Materials Science, 2004 - Springer

... The model materials were **unidirectional** (1D) composites fabricated from one single **fiber tow** com- prising ... or BN) and matrix with a **ceramic** holder, according to ...

[Web Search](#) - [BL Direct](#)

Introduction to Composites

H Hansmann, H Wismar - mb.hs-wismar.de

... described in the article "Applications of **Ceramic-Matrix Composites** ... A **fiber tow** can be handled as a single unit ... so can be wrapped or **woven** using commercial ...

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Strength of thermally exposed alumina fibers Part II bundle behavior - group of 4 »

PE Cantonwine - Journal of Materials Science, 2003 - Springer

... C [12]. The Nextel TM 610 **fiber tow** is a high strength reinforcement used in metal and **ceramic** matrices [13]. The high strength ...

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Synthesis, properties and applications of titanium aluminides - group of 5 »

FH Froes, C Suryanarayana, D Eliezer - Journal of Materials Science, 1992 - Springer

... Metal matrix composites 30 **Ceramics** (aluminides) and **ceramic** composites 30 Superalloys 13 Resin ... plates in + 13 alloys is responsible for **tow** elevated-temper ...

Cited by 68 - [Web Search](#)

Characterizing Mode II Delamination Cracks in Stitched Composites - group of 4 »

R Massabò, DR Mumm, B Cox - International Journal of Fracture, 1998 - Springer

... aggregates bridge microcracks and macrocracks in **ceramic**, polymer, or ... by various techniques, including stitching or **weaving** continuous **fiber** tows or ...

Cited by 15 - [Web Search](#) - [BL Direct](#)

Flexible towpreg for the fabrication of high thermal conductivity carbon/carbon composites - group of 7 »

JW Klett, DD Edie - Carbon(USA), 1995 - ms.ornl.gov

... then was hot-pressed into **unidirectional** composites, oxidized ... **tow** was passed through a tube furnace where it ... samples were carbonized in a Lindberg® **ceramic** box ...

Cited by 3 - [View as HTML](#) - [Web Search](#) - [BL Direct](#)

Effect of Packing on Void Morphology in Resin Transfer Molded E-Glass/Epoxy Composites - group of 2 »

YK HAMIDI, L AKTAS, MC ALTAN - Polymer composites, 2005 - doi.wiley.com

... such as metals [45, 46], **ceramics** [47–50 ... instance, a fast flow impregnating **unidirectional fiber** tows in ... expected to trap cylindrical intra-**tow** voids, while ...

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[BOOK] The Potential of Flax Fibres as Reinforcement for Composite Materials - group of 2 »

HL Bos - 2004 - agrofibrecomposites.com

... UD **unidirectional** ... **Tow** Short fibres (shorter than 30 cm), which are separated inadvertently from the **fiber** bundles together ... Variations in non-**woven** quality and ...

[View as HTML](#) - [Web Search](#) - [Library Search](#)

SIMULATION AND TESTING OF RESIN INFUSION MANUFACTURING PROCESSES FOR LARGE COMPOSITE STRUCTURES - group of 2 »

DB Mastbergen - 2004 - montana.edu

... matrix composites, **ceramic** matrix composites, and polymer matrix ... Figure 3: **Unidirectional**, double bias, and **woven** ... 11 In **woven** or stitched fabrics the maximum ...

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SG Advani, H MV Sohn, EM Sozer, AG Advani - 2002 - books.google.com

... of composite materials with polymer, **ceramics** and metal ... into the polymer matrix as **unidirectional fiber** arrays or by ... **fiber** preforms that are **woven** or stitched ...

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[BOOK] Structures Technology for Future Aerospace Systems - group of 5 »

AK Noor - 2001 - books.google.com

... 48 Innovative Reinforcements—Discontinuous **Fiber** Product Forms ... 71 Testing of Three-Dimensional **Woven** Preforms ... 148 Refractory and **Ceramic** Composite Development ...

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OVERVIEW ON THE EXPERIMENTAL INVESTIGATIONS OF THE FRACTURE TOUGHNESS IN COMPOSITE MATERIALS

A SZEKRENYES - heja.szif.hu

... VIC specimen (Fig.2) is mainly used in **ceramic** composites through ... The graph shows

the importance of the **tow** planes as ... Specimens with more **fiber** tows were tested ...

[View as HTML](#) - [Web Search](#)

[A Time-domain Reflectometry Method for Automated Measurement of Crack Propagation in Composites ... - group of 2 »](#)

A Obaid, S Yarlagadda, MK Yoon, NE Hager III, RC ... - Journal of Composite Materials, 2006 - jcm.sagepub.com

... mm) Sensor resistance per unit length (:/m) 1 Resin DCB SC79 epoxy

S2-glass **woven** fabric/SC 79 epoxy ARACON **fiber tow** 300 1.3 2 ...

[Web Search](#)

[Curing and Bonding of Composites using Electron Beam Processing - group of 3 »](#)

DL Goodman, GR Palmese - in Handbook of Polymer Blends and Composites, A. ... - udri.udayton.edu

... and **unidirectional** material forms. ... **Tow** placed AS4 Tape. ... The demonstration showed that

multiple layers, including base composite, **ceramic** tile armor and ...

[Cited by 1](#) - [View as HTML](#) - [Web Search](#)

[\[BOOK\] Fibrous Materials](#)

KK Chawla - 1998 - books.google.com

... that it has properties highly **biased** along its ... any material, polymer, metal, or **ceramic**,

into afibrous ... **Tow**: Bundle oftwtisted or untwisted continuous fibers. ...

[Cited by 20](#) - [Web Search](#) - [Library Search](#)

[\[BOOK\] Computer-Aided Design of Polymer-Matrix Composite Structures - group of 2 »](#)

SV Hoa - 1995 - books.google.com

... Thermomechanical Properties of Deformed **Woven** Fabric Composites ... the formulation ofmatrix

materials, **fiber** materi- als ... metal matrix and **ceramic** matrix composites ...

[Web Search](#) - [Library Search](#)

[Thermoplastic Composites in Europe to 2025 - group of 2 »](#)

TC Infrastructure, C Network-Coronet - netcomposites.com

Page 1. April 2004 Thermoplastic Composites in Europe to 2025 Foresight Study into

Future Research Needs Thermoplastic Composites Infrastructure ...

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[\[BOOK\] Metal Matrix Composites in Industry: An Introduction and a Survey - group of 2 »](#)

A Evans, CS Marchi, A Mortensen - 2004 - books.google.com

... namely an aluminium ingot (diameter 36 mm) and **ceramic** particulate reinforcements ...

fiberglass" (somewhat more properly called a glass **fibre** reinforced polymer ...

[Cited by 3](#) - [Web Search](#) - [Library Search](#)

[\[BOOK\] Design and Optimization of Laminated Composite Materials - group of 2 »](#)

Z Gürdal, RT Haftka, P Hajela - 1999 - books.google.com

... are metal particles in metallic, plastic, or **ceramic** matrices. ... book does not really

differentiate between the **woven** and the **unidirectional** continuous- or ...

[Cited by 65](#) - [Web Search](#) - [Library Search](#)

[Continuous cellulose **fiber**-reinforced cellulose ester composites. I. Manufacturing options - group of 3 »](#)

KC Seavey, I Ghosh, RM Davis, WG Glasser - Cellulose, 2001 - Springer

... **Ceramics** 1 2500 180 1.5 2.6 ... The impregnated rovings (**fiber tow**) consist- ing of 3,500

filaments, each, resulted in **unidirectional** composites having a ...

[Cited by 4](#) - [Web Search](#) - [BL Direct](#)

[A methodology for Cartesian braiding of three-dimensional shapes and special structures - group of 5 »](#)

TD Kostar, TW Chou - Journal of Materials Science, 2002 - Springer

... How- ever, the lack of **unidirectional** reinforcement results in low ... and a small **fiber**

bundle (**tow**) size will ... material such as carbon, piezo-**ceramic**, metal, etc ...

[Cited by 2](#) - [Web Search](#) - [BL Direct](#)

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MJ Gronet, GA Jensen, JW Hoskins - 1995 - ntrs.nasa.gov

... 3-7 3.1.3 Triaxially **Woven** Fabrics ... for a telephone company-size market, and will

compete with terrestrial **fiber**- optic networks, particularly ...

[View as HTML](#) - [Web Search](#) - [Library Search](#)

[\[BOOK\] Composite Materials: Science and Engineering - group of 3 »](#)

KK Chawla - 2001 - books.google.com

... Among his other books are the following: **Ceramic** Matrix Composites, Fibrous Materials ...

8Carbon Fiber Composites 252 ... BFiber Packing in Unidirectional Composites ...

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LIQUID ROCKETENGINE SELF-COOLED COMBUSTION CHAMBERS

C PROPULSION - ntrs.nasa.gov

... Combustion Chambers 45 Typical Room-Temperature Properties of Fiber-Reinforced

Graphite Composites 47 ix Page 12. Page 13. LIQUID ROCKET ENGINE ...

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C Ageorges, Y Lin - 2002 - books.google.com

... Composite integral fit CMC Ceramic matrix composite ... thermal conductivity ofa reinforcing

fibre k ,, Thermal ... thermal conductivity ofa unidirectional composite k ...

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[BOOK] An Introduction to Composite Products: Design, Development and Manufacture - group of 2 »

K Potter - 1997 - books.google.com

... within the fibre, as are many ceramic fibres. ... Carbon fibre composites were widely

touted as wonder ... of the dubious practice of quoting unidirectional properties ...

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THE FIRST FAIR DINKUM MACRO-LEVEL FIBROUS COMPOSITE FAILURE CRITERIA

LJ Hart-Smith - McDonnell Douglas Paper MDC 97K0009, presented to 11th ICCM ..., 1997 - mech.uq.edu.au

... be possible to differentiate between fibre and matrix ... laminates made from layers of unidirectional tape, the ... laminates made from layers of woven fabric, the ...

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New formulations for the Hopkinson bar technique to extract a response of the constituent material ... - group of 4 »

H Mahfuz, W Al Mamun, L Austin, A Haque, S Jeelani - Proceedings of the Institution of Mechanical Engineers, Part ..., 2001 - journals.pepublishing.com

... Unidirectional bre tows containing 3000 laments in each tow were used to build up the bre core. A total of 56 tows were used in the core. ...

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J Murphy - 2001 - books.google.com

... vt Additives for Plastics Handbook 5. 1 Fibres: The Basic Properties 39 5.2 Types of Reinforcing Fibre 40 5.2. ... 3 Glass fibre 43 5.2. 3. 1 E-CR glass 45 5.2. ...

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Quasi-Static and Fatigue Evaluation of Pultruded Vinyl Ester/E-Glass Composites

SSP Phifer - 1998 - scholar.lib.vt.edu

... military applications were fabricated by hand lay-up technique using expensive fiber reinforced polymer preimpregnated unidirectional tape or woven fabric and ...

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[BOOK] Composite Materials: Testing and Design, Stp 1242

SJ Hooper - 1997 - books.google.com

... Mode Interlaminar Fracture of Woven Fabric Carbon ... Compressive Strength of Unidirectional Composites: Measurements and ... METAL MATRIX AND CERAMIC MATRIX COMPOSITES ...

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[BOOK] Composite Materials: Fatigue and Fracture

RB Bucinell - 1999 - books.google.com

... laminate differs from that in a tow test ... present a life prediction method for ceramic matrix com ... versus cycles to failure for several unidirectional TMC systems ...

[Web Search](#) - [Library Search](#)

3D Biocomposites for Automotive Interior Parts - group of 2 »

A Bjurenstedt, F Lärneklint - epubl.luth.se

... composites in which the fibers are mainly unidirectional oriented ... up to 100 times stronger in fiber form and ... Glass, carbon and some ceramic fibers have close to ...

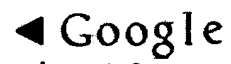
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AJ Peacock, P Peacock - 2000 - books.google.com

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